**In the Claims:**

1. (Amended) An implantable, biodegradable device, comprising a fibrous matrix, said fibrous matrix comprising first fibers A and second fibers B, wherein fibers A biodegrade faster than fibers B, ~~and wherein~~ fibers A and B are present in relative amounts and are organized such that the fibrous matrix is provided with properties useful in repair and/or regeneration of mammalian tissue and one of fibers A and B comprises a biodegradable glass.

2. The device of claim 1 wherein the rate of resorption of the fibrous matrix approximates the rate of replacement of the fibrous matrix by tissue.

3. The device of claim 1 wherein the weight ratio of fibers A to fibers B is from about 19:1 to about 1:19.

4. The device of claim 1 wherein the porosity of the fibrous matrix is effective to facilitate uniform tissue growth therein.

5. The device of claim 4 wherein pores ranging in size from about 20 microns to about 400 microns are interconnected and comprise from about 70 percent to about 95 percent of the fibrous matrix.

6-10. Canceled

11. The device of claim 1 wherein the fibrous matrix comprises an organized network selected from the group consisting of threads, yarns, nets, laces, felts and nonwovens.

12. The device of claim 1 wherein the fibrous matrix comprises a configuration selected from the group consisting of a disk, a rectangle, a square, a tube and a star.

13. The device of claim 1 wherein the diameters of fibers A and fibers B range from about 5 microns to about 100 microns.

14. The device of claim 1 wherein fibers A and fibers B are bonded together by a biodegradable polymeric binder.

15. The device of claim 14 wherein the biodegradable polymeric binder is selected from the group consisting of polycaprolactone, polylactic acid, polydioxanone and polyglycolic acid.

16. The device of claim 1 wherein the fibrous matrix comprises a gradient structure.

17. The device of claim 1 wherein said fibrous matrix comprises a continuous transition from fibers A at the periphery of the device to fibers B at the center of the device.

18. The device of claim 1 wherein said fibrous matrix comprises a continuous transition from fibers A at the top of the device to fibers B at the bottom of the device

19. The device of claim 1 wherein the fibrous matrix further comprises a biodegradable, fibrous polymeric coating.

20. The device of claim 19 wherein the biodegradable polymeric coating is selected from the group consisting of polylactic acid, polyglycolic acid, polycaprolactone and copolymers thereof.

21. The device of claim 1 wherein the fibrous matrix is chemically crosslinked or combined with hydrogels.

22. (Amended) The device of claim 1 wherein the fibrous matrix is coated with an adhesive biological factor selected from the group consisting of fibronectin, vitronectin, ~~"~~V-CAM, I-CAM, N-CAM, elastin, fibrillin, laminin, actin, myosin, collagen, microfilament, intermediate filament, antibody, and fragments thereof~~"~~, hyaluronic acids,

glycosaminoglycans, collagens, peptide fragments, pleiotrophin, endothelin and tenascin-C.

23. (Amended) The device of claim 1 wherein the fibrous matrix is coated with a growth factor selected from the group consisting of members of TGF-β□ family, bone morphogenic proteins, fibroblast growth factors-1 and –2, platelet-derived growth factor-AA, and –BB, platelet rich plasma and vascular endothelial cell-derived growth factor ~~(VEGF)~~.

24. The device of claim 1 wherein the fibrous matrix further comprises seeded or cultured therein cells selected from the group consisting of bone marrow cells, stromal cells, stem cells, embryonic stem cells, chondrocytes, osteoblasts, osteocytes, fibroblasts, pluripotent cells, chondrocyte progenitors, osteoclasts, endothelial cells, macrophages, adipocytes, monocytes, plasma cells, mast cells, umbilical cord cells, leukocytes, epithelial cells, myoblasts, and precursor cells derived from adipose tissue.

25. Canceled

26. Canceled

27. The implant of claim 1, further comprising a fabric barrier layer formed on at least one surface of the implant.

28. The implant of claim 27, wherein the fabric barrier is formed on a top surface and a bottom surface of the implant.

29. The implant of claim 27, wherein the fabric barrier is a dense, fibrous fabric that is effective as a barrier to hyperplasia and tissue adhesion.

30. The implant of claim 29, wherein the fabric barrier is formed of an electrostatically spun aliphatic polyester.

31. The device of claim 1 wherein fibers A or fibers B comprise a biodegradable polymer.

32. The device of claim 31 wherein the biodegradable polymer is selected from the group consisting of aliphatic polyesters, poly(amino acids), copoly(ether-esters), polyalkylene oxalates, polyamides, poly(iminocarbonates), polyorthoesters, polyoxaesters, polyamidoesters, poly(anhydrides), polyphosphazenes and biopolymers.

33. Canceled

34. (Amended) The device of claim ~~33~~ 1 wherein the biodegradable glass comprises a silicate-containing calcium phosphate glass.

35. (Amended) The device of claim ~~33~~ 1 wherein the biodegradable glass comprises a calcium phosphate glass wherein some of the calcium ions are replaced by ions selected from the group consisting of iron, sodium, magnesium, potassium, aluminum and zirconium.

36. (Amended) The device of claim ~~33~~ 1 wherein the biodegradable glass comprises from about 50 to about 70 weight percent phosphate, from about 0 to about 35 weight percent iron, with the remainder comprising calcium.

37. The device of claim 1 wherein fibers A and fibers B comprise a biodegradable glass.

38. The device of claim 37 wherein the biodegradable glass comprises a silicate-containing calcium phosphate glass.

39. The device of claim 37 wherein the biodegradable glass comprises a calcium phosphate glass wherein some of the calcium ions are replaced by ions selected from the group consisting of iron, sodium, magnesium, potassium, aluminum and zirconium.

40. The device of claim 37 wherein the biodegradable glass comprises from about 50 to about 70 weight percent phosphate, from about 0 to about 35 weight percent iron, with the remainder comprising calcium.

41. The device of claim 37 wherein the fibrous matrix comprises from about 50 to about 99 percent of fibers A prepared from a calcium/iron/phosphate glass, and from about 50 to about 1 percent of fibers B prepared from an iron/calcium/phosphate glass.

42. A device of claim 41 wherein the calcium/iron/phosphate glass comprises about 17.0 weight percent CaO, about 17.1 weight percent iron and about 65.9 weight percent $P_2O_5$, and the iron/ calcium/phosphate glass comprises about 34 weight percent iron, about 5.7 weight percent CaO and about 60 weight percent $P_2O_5$.

43. A device of claim 1 wherein the fiberous matrix is penetrated with a bioabsorbable polymer.

44. A device of claim 43 wherein bioabsorbable polymer used to the penetrate the fiberous matrix is selected from the group consisting of aliphatic polyesters, poly(amino acids), copoly(ether-esters), polyalkylene oxalates, polyamides, poly(iminocarbonates), polyorthoesters, polyoxaesters, polyamidoesters, poly(anhydrides), polyphosphazenes and biopolymers.